

## CLAIMS

1. A method of treating a disease condition mediated by neutrophil cells in a patient, comprising administering a histamine binding compound to the patient in a therapeutically-effective amount.
- 5 2. A method according to claim 1, wherein said disease condition is an allergic condition, an inflammatory condition or an auto-immune condition.
3. A method according to claim 1 or claim 2, wherein said disease condition is selected from the group consisting of adult respiratory distress syndrome (ARDS); infant  
10 respiratory distress syndrome (IRDS); severe acute respiratory syndrome (SARS); chronic obstructive airways disease (COPD); cystic fibrosis; ventilator induced lung injury (VILI); capillary leak syndrome; reperfusion injury including injury following thrombotic stroke, coronary thrombosis, cardiopulmonary bypass (CPB), coronary artery bypass graft (CABG), limb or digit replantation, organ transplantation, post-operative inflammation or marginal infiltrates, bypass enteritis, bypass arthritis,  
15 thermal injury and crush injury; psoriasis; psoriatic arthropathy; rheumatoid arthritis; Crohn's disease; ulcerative colitis; immune vasculitis including Wegener's granulomatosis and Churg-Strauss disease; alcoholic liver disease; neutrophil mediated glomerulonephritis; systemic lupus erythematosus; lupus nephritis; atherosclerosis; systemic sclerosis; gout; periodontal disease, ocular inflammation  
20 including dry eye, Sjogren's syndrome, contact lens associated papillary conjunctivitis (CLAPC), contact lens associated marginal infiltrates, post surgical inflammation including surgery for cataract, glaucoma, corneal transplantation and laser in-situ keratomileusis (LASIK), severe allergic conjunctivitis, vernal keratoconjunctivitis (VKC), diffuse lamellar keratitis, infective and non-specific conjunctivitis, keratitis and blepharitis, shield ulcers.  
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4. A method according to any one of the preceding claims, wherein said histamine binding compound is a histamine scavenger.
5. A method according to claim 4, wherein said histamine scavenger binds to histamine with a dissociation constant of greater than  $10^{-7}$ M.
- 30 6. A method according to any one of the preceding claims, wherein said histamine binding compound is a protein.

7. A method according to claim 6, wherein said histamine binding protein is a vasoactive amine binding protein.

8. The method according to any one of the preceding claims, where the vasoactive amine binding protein is:

- 5 a) any vasoactive amine binding protein that binds specifically to histamine with a dissociation constant of less than  $10^{-7}$ M and which belongs to the same protein family as the proteins MS-HBP1, FS-HBP1 and FS-HBP-2 disclosed in International Patent Application No. WO97/44451, wherein a protein is considered to belong to this protein family if the primary, mature monomer sequence of the protein has no more than 260 amino acids and at least 30 of the amino acids in the protein's complete sequence, preferably at least 40, 50, 60, 70, 80, 90, 100 or more, are conserved as identical residues in an alignment of that protein and the proteins MS-HBP1, FS-HBP1 and FS-HBP-2, the alignment preferably having been obtained using ClustalW (Thompson et al., 15 1994, NAR, 22(22), 4673-4680);
- b) a protein from a haematophagous arthropod that binds specifically to histamine with a dissociation constant less than  $10^{-7}$ M and which contains the sequence motifs D/E A W K/R (preferably DAWK, more preferably QDAWK) and Y/C E/D L/I/F W (preferably Y/C ELW);
- 20 c) a natural biological variant, such as an allelic variant or a geographical variant, of a protein as defined in (a) or (b) above;
- d) a functional equivalent of a protein as defined in (a), (b) or (c) above that contains single or multiple amino-acid substitution(s), addition(s), insertion(s) and/or deletion(s) from the wild type protein sequence and/or substitutions of 25 chemically-modified amino acids that do not affect the biological function of binding to histamine;
- e) an active fragment of a protein as defined in (a), (b), (c) or (d) above, wherein "active fragment" denotes a truncated protein that retains the biological function of binding to histamine; and
- 30 f) a fusion protein comprising a protein as defined in (a), (b), (c), (d) or (e) above fused to a peptide or other protein, such as a label, which may be, for instance, bioactive, radioactive, enzymatic or fluorescent, or an antibody.

9. A method according to claim 7 or claim 8, wherein said vasoactive amine binding protein is EV131 or a fragment thereof.
10. Use of a histamine binding compound as recited in any one of the preceding claims, in the manufacture of a medicament for the treatment of a disease condition mediated by neutrophil cells.